

LIST OF CURRENT CLAIMS

1. (Currently Amended) Cooling arrangement for an electric motor or generator that includes a housing, a slotless tubular stator lamination, a rotor with permanent magnets and electric windings which are provided between the stator lamination and the rotor, comprising a cooler upon which said windings are provided, said cooler comprising a mainly cylindrical cooling element provided between the stator lamination and the rotor, said cooling element having one or several axially extending passages defined therein, the passages defining a space for a cooling fluid, the cooling element being provided on an inner wall thereof with teeth directed radially towards the rotor and which extend in an axial direction of the stator and in between which axially directed grooves are defined, such that the cooling element has an external form of a conventional stator lamination with teeth for providing said windings;
wherein the windings are provided on the cooler within the grooves between the teeth and separated from the space inside the passages to prevent contact between the windings and the cooling fluid.
2. (Previously Presented) Cooling arrangement according to claim 1, wherein the teeth and grooves are evenly distributed about an inner perimeter of the cooler.
3. (Previously Presented) Cooling arrangement according to claim 1, wherein the windings are provided around said teeth and wherein the windings have axial parts which extend in the grooves and bent parts which are bundled together into a winding head disposed on both far ends of the stator.
4. (Canceled)
5. (Currently Amended) Cooling arrangement according to claim 1 [[4]], wherein the passages are axially directed and are connected to an outlet collector on one far end of the stator and to an inlet collector on the other far end of the stator, respectively.

6. (Currently Amended) Cooling arrangement according to claim 4, wherein the cooling element comprises a double-walled tube including an outer tube and an inner tube defining the inner wall.
7. (Previously Presented) Cooling arrangement according to claim 6, wherein the outer tube is a cylindrical tube whose outer diameter corresponds to the inner diameter of the stator lamination, and the inner tube is a corrugated tube with axially directed teeth and grooves, said outer and the inner tubes connected to each other by means of partitions which, together with the outer and the inner tubes, define the passages for the cooling fluid.
8. (Withdrawn) Cooling arrangement according to claim 4, wherein the cooling element comprises axially directed pipes which form said passages and which are provided at mutually equal distances from each other between the stator lamination and the rotor and are cased at least with their far ends in two ring-shaped flanges which are fixed in the stator lamination.
9. (Withdrawn) Cooling arrangement according to claim 8, wherein at least a part of the pipes is situated partially between the axial parts of the windings.
10. (Withdrawn) Cooling arrangement according to claim 8, wherein ring-shaped flanges are provided with teeth which are radially directed towards the rotor, in between which said windings are provided.
11. (Withdrawn) Cooling arrangement according to claim 10, wherein the space between the pipes and the axial parts of the windings is at least partially filled with a thermally conductive and electrically insulating filling material.
12. (Currently Amended) Cooling arrangement according to claim 5 [[4]], wherein the outlet and inlet collectors are each formed of a ring-shaped element which confines a ring-shaped chamber, said ring-shaped element being connected to a side

wall against a far end of the cooling element and wherein this side wall has been worked open at the said passages of the cooling element.

13. (Previously Presented) Cooling arrangement according to claim 12, wherein each ring-shaped element is connected to the housing with an outer wall and wherein at least one opening is provided in this outer wall, which opening is situated opposite to an outlet opening and inlet opening, respectively, in the housing.

14. (Previously Presented) Cooling arrangement according to claim 13, wherein, in the ring-shaped element in the wall directed towards the rotor there is provided a recess in which the winding head is cased on the respective far end of the stator.

15. (Withdrawn) Cooling arrangement according to claim 4, wherein the outlet and inlet collectors comprise a ring-shaped chamber which is confined by the housing; said cooling element; an inner tube which is provided concentrically in the cooling element; and a ring-shaped lid which is connected to the housing and to said inner tube.

16. (Withdrawn) Cooling arrangement according to claim 15, wherein in the housing, at the height of the outlet and inlet collectors, there is provided at least one outlet or inlet opening, respectively.

17. (Previously Presented) Cooling arrangement according to claim 1, wherein the cooler comprises a thermally conductive and electrically insulating material.

18. (Canceled)